

Listing of Claims:

Claims 1-55 cancelled.

56. (Previously Presented) A method for synthesizing and introducing latency into the synthesis of a polymer array, said polymer array selected from the group consisting of an oligonucleotide array and a peptide array, on a substrate comprising the steps of:

- a) providing a surface having one or more synthesis intermediates bound thereon, said synthesis intermediates selected from the group consisting of a linker, a nucleotide, an amino acid, a peptide and an oligonucleotide, and the synthesis intermediates having a reactive group protected from reaction by a first photosensitive protecting group, said first protecting group having a first wavelength of light which removes said protecting group from said reactive group;
- b) coating said surface with a substance comprising a photobleachable compound, wherein said photobleachable compound absorbs light having said first wavelength;
- c) irradiating at least a part of said surface with light having said first wavelength to:
 - i) bleach said photobleachable compound; and
 - ii) remove said protective group;
- d) removing said substance from said surface;
- e) reacting a subsequently added synthesis intermediate, said subsequently added synthesis intermediate selected from the group consisting of a linker, a nucleotide, an amino acid, a peptide and an oligonucleotide, with the unprotected reactive group, the subsequently added synthesis intermediate having a reactive group protected from reaction by a second photosensitive protective protecting group, wherein said first and second photosensitive protecting groups are the same or different and said protecting group having a second wavelength of light which removes said protecting group from said reactive group, wherein said first and said second wavelengths of light are the same or different;

- f) recoating said surface with a substance comprising a photobleachable compound, wherein said photobleachable compound absorbs light having said second wavelength; if another synthesis intermediate is to be added; and
- g) repeating steps b) through f) or not, until the desired polymer array is obtained.

Claims 57-59 are cancelled.

60. (Previously presented) The method of claims 56 wherein said synthesis intermediate is a nucleotide.

61. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is a polynucleotide.

62. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is an amino acid.

Claim 63 is cancelled.

64. (Previously presented) The method of claims 56 wherein said photobleachable compound is a photobleachable dye.

65. (Previously presented) The method of claim 64 wherein said photobleachable dye is pyrylium dye or diazonium dye.

Claims 66-79 are cancelled.

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